

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:
Barsness et al.

Serial No.: 10/829,624

Confirmation No.: 7304

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Filed: April 22, 2004

Group Art Unit: 2162

Examiner: Giovanna B. Colan

For: TECHNIQUES FOR IDENTIFYING MERGEABLE DATA

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

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August 5, 2008
Date

Joseph Jong/
Joseph Jong

REPLY BRIEF

Applicants submit this Reply Brief to the Board of Patent Appeals and Interferences in response to Examiner's Answer dated June 5, 2008. While Applicants maintain each of the arguments submitted in Applicants' previously submitted Appeal Brief, Applicants make the following further arguments in light of the Examiner's Answer. Please charge any additional fees that may be required to make this Reply Brief timely and acceptable to Deposit Account No. 09-0465/ ROC920030407US1.

ARGUMENTS

The Examiner continues to suggest that the combination of *Sandler* and *Kaufman* discloses the method recited by claim 1 “for identifying correlated columns from database tables” that includes:

determining correlation attributes for a first column and a second column from one or more database tables, the correlation attributes describing for each column at least one of the column and content of the column; ... upon determining the first and second columns are correlated, merging the first and second columns to create a third column that contains each data value stored in the first and second columns; and storing the third column in the database.

Claims 22 and 43 recite a similar limitation. The Examiner continues to point to a description in *Sandler* of values from a table being added together to suggest that this reference discloses “determining correlation attributes for a first column and a second column” as well as “merging the first and second columns to create a third column that contains each data value stored in the first and second columns.” Specifically, the Examiner cites to a table illustrated in *Sandler*, Figure 18A with the following values:

TableT1 (Figure 18, 1800)	
F1	K1
A	1
A	2
B	3
K	4
B	5

Table Target (Figure 18, 1802)	
F1	K1
A	3
B	8
K	4

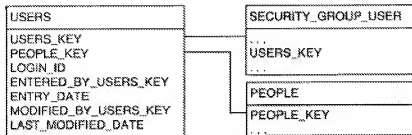
In this example, as part of an “aggregation operation” disclosed in *Sandler*, the repeated “A” values of “1” and “2” in Table T1 are summed to create an entry of “A” with a value of “3”. Similarly, the repeated “B” values of “3” and “5” in Table T1 are summed to create an entry of “B” with a value of “8.” Clearly, the process of simply summing up the numerical values in the K1 column, based on repeating values in the F1 column, does not disclose the claimed step of “determining correlation attributes for a first column and a second column from one or more database tables,” as suggested by the Examiner.

Moreover, claim 1 (and claims 22 and 43) goes on to recite, a step performed directly in response to determining that two columns are “correlated”; namely, upon determining the first and second columns are correlated, the first and second columns are merged to create a third column that contains each data value stored in the first and second columns. That is, as claimed, the merging occurs in direct response to a determination that at least two columns are correlated, and in direct response, the data values are stored in a third column. Nevertheless the Examiner points to the same passages where values from a single column are added together, not merged to create a third column. Applicants submit that these operations are plainly distinct from one another. Perhaps recognizing this, the Examiner now also cites to an example of a “fuse” operation described in *Sandler*. As disclosed in *Sandler*, a “fuse” operation may be used to join two tables together (in the language of SQL, a “fuse” operation may be performed using the well known operation of a full outer join). In this process, no third column is created by the table join. Instead, each column present in two tables being joined is present in the third table, no new columns are created.

More importantly, however, nothing in the description of the “fuse” operation corresponds to the relationship between limitations recited by the present claims. Specifically, nothing in the passages from *Sandler* describing certain entries from one table being added together (i.e., and “aggregation operation”) or the “fuse” operation (“i.e., a full-outer join between two tables) disclose anything being performed in response to determining that two columns are “correlated”; namely, nothing in these table operations disclose the claimed steps recited by claims 1, 22, and 43 of:

- determining correlation attributes for a first column and a second column from one or more database tables, the correlation attributes describing for each column at least one of the column and content of the column;
- comparing the correlation attributes from the first and second column;
- identifying similarities between the first and second column on the basis of the comparison.

Finally, the Examiner also attempts to sustain the present rejection by citing to *Kaufman*, Figure 5B, et seq., reproduced below:



Plainly, this figure depicts a relational database schema for three tables. The general content of these tables is discussed at *Kaufman*, ¶¶ 134-139. Specifically, *Kaufman* indicates that this schema represents a “reference implementation” for the invention disclosed in *Kaufman* that includes six tables (including the three tables shown in Figure 5B). As disclosed, the reference implementation includes a first table “SECURITY_GROUP_USER” having the seven listed columns, a second table named “PEOPLE,” and a third table “USERS.” As described in *Kaufman*, the “USERS” table includes a “USERS_KEY” column and a “PEOPLE_KEY” column used as a foreign key into the “SECURITY_GROUP_USER” table and the “PEOPLE” table. As is well known, a “foreign key,” is a reference in one table to a key in another table, meaning that the referencing table has a column that may be used to store values of a primary key in another table.

This example of a relational schema of these three tables has no apparent relevance to using “correlation attributes for a first column and a second column” to identify “similarities between the first and second column” and “upon determining the first and second columns are correlated, merging the first and second columns to create a third column that contains each data value stored in the first and second columns,” as claimed. Instead this material provides a particular relational schema used by the invention disclosed in *Kaufman*. Nevertheless the Examiner suggests:

Fig 5B, wherein the column “SECURITY_GROUP_USER” corresponds to the first column claimed, the column “PEOPLE” corresponds to the second column claimed, and wherein the “USERS” column corresponds to the third column claimed, also note that the “USERS” column contains each data value stored in the first and second column, such as “USERS_KEY” and “PEOPLE_KEY.” ... The “USERS” incorporates (among others) Login_ID field, which is correlated against the system-user’s operating

environment credentials. (In the reference implementation this is the UID which has been authenticated and forwarded by the web server; alternatively it could be the user's OS login.) When the system establishes a new user-session (upon the user's initial contact), it attempts this correlation to a valid USERS.Login_ID. If no correlation can be made", Kaufman. ... Examiner also notes that ... the Kaufman reference was presented for the purpose of: "the third column contains each data value stored in the first and second columns."

Examiner's Answer, p. 21. Applicants respectfully submit that the Examiner is simply mistaken in suggesting that "'SECURITY_GROUP_USER' corresponds to the first column claimed," as "SECURITY_GROUP_USER" does not refer to a column, it refers to a table. See e.g., *Kaufman*, ¶¶ 133, 134 ("In the reference implementation, six tables support these security features: ... SECURITY_GROUP_USERS ...").

Similarly, the Examiner errs in suggesting that "the column 'PEOPLE' corresponds to the second column claimed, and wherein the 'USERS' column corresponds to the third column claimed," as both "PEOPLE" and "USERS" refer to tables. For example, *Kaufman* describes these constructs as:

[0135] The PEOPLE table contains an Active_Flag field, which allows for "deactivation" of individuals without destroying existing RI links throughout the database. ...

[0136] The USERS table incorporates (among others) a Login_ID field, which is correlated against the system-user's operating-environment credentials. ...

Kaufman, ¶¶ 135, 136. Furthering this misconception, the Examiner goes on to suggest that that "the 'USERS' column contains each data value stored in the first and second column, such as 'USERS_KEY' and 'PEOPLE_KEY'." Plainly, the USERS "column" does not contain "each data value stored in the first and second column," as suggested by the Examiner. Among others things, the "PEOPLE" table includes an "Active_Flag field" which is not included in the "USERS" table. That is, the "USERS" table includes a "USERS_KEY" column and "PEOPLE_KEY" column as keys into the other two tables, but plainly does not include the values of other columns from these other two tables.

For all the foregoing reasons, Applicants submit that the present rejection fails to demonstrate that claim 1, 22, and 43 are not patentable over *Sandler* in view of *Kaufman*. Further, regarding claims 2 and 23; claims 9, 11, 14, 30, 34, and 35, claims

3-6, 7-8, 10, 12-13, 15-16, 24-27, 28-29, 31-33, and 36-37; claims 17, 38, and 44; and claims 18-21 and 39-42, Applicants believe the Arguments set forth in Applicants' Appeal Brief demonstrate the patentability of these claims over *Sandler* in view of *Kaufman*.

CONCLUSION

The Examiner errs in finding that claims 1-44 are unpatentable over *Sandler* in view of *Kaufman* under 35 U.S.C. § 103(a).

Withdrawal of the rejections and allowance of all claims is respectfully requested.

Respectfully submitted, and
S-signed pursuant to 37 CFR 1.4,

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